

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A MIMO transceiver comprising:  
an antenna array having a plurality of antennas; and  
a scattering structure, associated with the plurality of antennas, ~~for~~  
receiving configured to  
receive the signals from the plurality of antennas, and  
to increase path diversity associated with the transceiver.

Claim 2 (Original): A transceiver according to claim 1, wherein the scattering structure is a passive structure.

Claim 3 (Original): A transceiver according to claim 1, wherein the scattering property of the scattering structure can be externally adjusted.

Claim 4 (Original): A transceiver according to claim 1, further comprising a controller for controlling the scattering structure.

Claim 5 (Currently Amended): ~~A transceiver according to claim 4, A MIMO~~  
transceiver comprising:

an antenna array having a plurality of antennas;  
a scattering structure, associated with the plurality of antennas, configured to  
receive the signals from the plurality of antennas, and  
to increase path diversity associated with the transceiver; and

a controller configured to control the scattering structure to modify the eigenmodes formed between the transceiver and a receiver.

~~wherein the controller controls the scattering structure to modify the eigenmodes formed between the transceiver and a receiver.~~

Claim 6 (Currently Amended): ~~A transceiver according to claim 4,~~ A MIMO transceiver comprising:

an antenna array having a plurality of antennas;

a scattering structure, associated with the plurality of antennas, configured

to receive the signals from the plurality of antennas, and

to increase path diversity associated with the transceiver; and

a controller configured to receive feedback information from the receiver and to use the feedback information to control the scattering structure.

~~wherein the controller receives feedback information from the receiver and uses the feedback information for controlling the scattering structure.~~

Claim 7 (Original): A transceiver according to claim 1, wherein the scattering structure scatters the incident signals by at least one of diffraction, reflection or refraction or use of a wave-guide.

Claim 8 (Original): A transceiver according to claim 1, wherein the scattering structure is a diffraction grating.

Claim 9 (Original): A transceiver according to claim 1, wherein the scattering structure comprises one or more scattering elements, each associated with one or more of said antennas.

Claim 10 (Original): A transceiver for use with a second transceiver comprising an antenna array having a plurality of antennas and a scattering structure associated with the antennas for receiving the signals from the antennas, the transceiver having

an antenna array having a plurality of antennas;

feed back means for generating feedback information about the properties of the signals received by the antenna array; and

transmission means for sending said feedback information to said second transceiver for adjusting said scattering structure.

Claim 11 (Original): A communication system comprising a first transceiver and a second transceiver, the second transceiver comprising:

a second transceiver antenna array having a plurality of antennas;

a scattering structure associated with the antennas for receiving the signals from the antennas; and

a controller for controlling the scattering structure, and the first transceiver comprising:

a first transceiver antenna array having a plurality of antennas;

feed-back means for generating feedback information about the properties of the signals received by the first transceiver antenna array; and

transmission means for sending said feedback information to said second transceiver for adjusting said scattering structure.

Claim 12 (Original): A communication system including a transceiver according to claim 1.

Claim 13 (Original): A method of scattering signals produced by an array of antennas, the method comprising:

interposing a scattering structure between the antennas and a receiver to scatter the beams produced by the antennas,

receiving feedback information concerning the strength of the eigenmodes established between the antennas and a receiver; and

adjusting the scattering structure to vary the scattering of the beams produced by the antennas.

Claim 14 (Original): A method according to claim 13, wherein the scattering structure is a passive structure.

Claim 15 (Original): A method according to claim 13, wherein the scattering structure scatters the incident signals by at least one of diffraction, reflection or refraction.

Claim 16 (Original): A method according to claim 13, wherein the scattering structure is a diffraction grating

Claim 17 (Original): A method according to claim 13, wherein the scattering structure comprises one or more scattering elements, each associated with one or more of said antennas.

Claim 18 (Currently Amended): A MIMO transceiver comprising:  
an antenna array having a plurality of antennas; and  
a scattering structure, associated with the plurality of antennas, ~~for~~  
~~receiving~~configured  
to receive and forward incoming signals and passing them on to the antenna  
array of antennas, and  
to increase path diversity associated with the transceiver.

Claim 19 (Original): A transceiver according to claim 18, wherein the scattering structure is a passive structure.

Claim 20 (Original): A transceiver according to claim 18, wherein the scattering property of the scattering structure can be externally adjusted.

Claim 21 (Original): A transceiver according to claim 18, further comprising a controller for controlling the scattering structure.

Claim 22 (Currently Amended): ~~A transceiver according to claim 21, A MIMO~~  
transceiver comprising:

an antenna array having a plurality of antennas; and  
a scattering structure, associated with the plurality of antennas, configured  
to receive and forward incoming signals to the antenna array, and  
to increase path diversity associated with the transceiver; and

a controller configured to control the scattering structure to modify the eigenmodes formed between the transceiver and a transmitter.

~~wherein the controller controls the scattering structure to modify the eigenmodes formed between the transceiver and a transmitter.~~

Claim 23 (Currently Amended): A MIMO transceiver, comprising:  
an antenna array having a plurality of antennas; and  
a scattering structure, associated with the plurality of antennas, configured  
to receive and forward incoming signals to the antenna array, and  
to increase path diversity associated with the transceiver; and  
a controller configured to analyze the received signal and use an analysis result to  
control the scattering structure.

~~A transceiver according to claim 21, wherein the controller analyses the received signal and uses the information for controlling the scattering structure.~~

Claim 24 (Original): A transceiver according to claim 18, wherein the scattering structure scatters the incident signals by at least one of diffraction, reflection or refraction or use of a wave-guide.

Claim 25 (Original): A transceiver according to claim 18, wherein the scattering structure is a diffraction grating.

Claim 26 (Original): A transceiver according to claim 18, wherein the scattering structure comprises one or more scattering elements, each associated with one or more of said antennas.